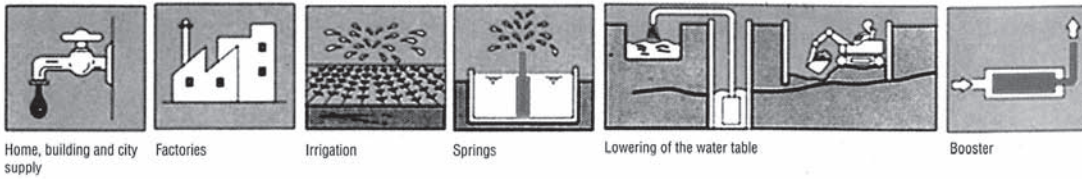
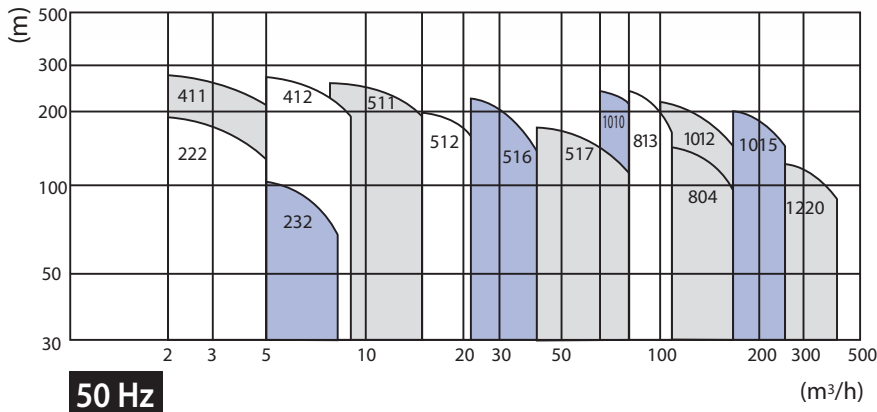


SUBMERSIBLE PUMPS FOR DEEP WELLS



Operation range



Features

Quality as a principle

- Greater savings and high operating yield
- Safe and continuous operation with little maintenance
- Simple construction and easy maintenance
- Designed for high resistance to abrasion by sand.



CONSTRUCTION



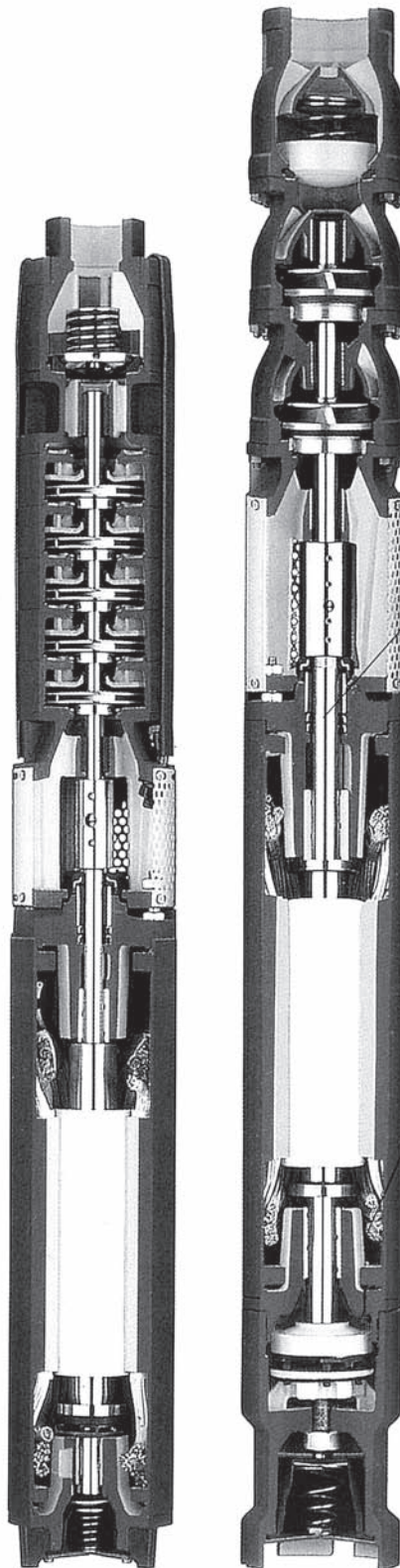
Stainless steel radial impellers for flow rates of up to 35 m³/h. High-quality semi-axial bronze impellers for flow rates of up to 480 m³/h. Greater resistance to abrasion.



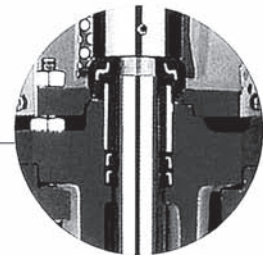
Nylon with fiberglass diffusers for flow rates of up to 35 m³/h, providing greater efficiency.



Hexagonal and octagonal pump shaft rubber bearings, to enable sand runoff and reduce wear on the bearings.



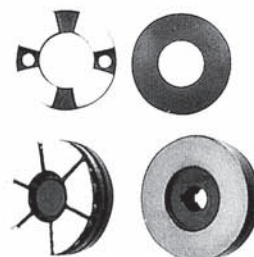
Tapered bushings to fix the pump impellers. Speed and precision in assembly.



Heavy-duty system to prevent sand from finding its way into the motor.



Motor can be rewound which provides lower maintenance costs.

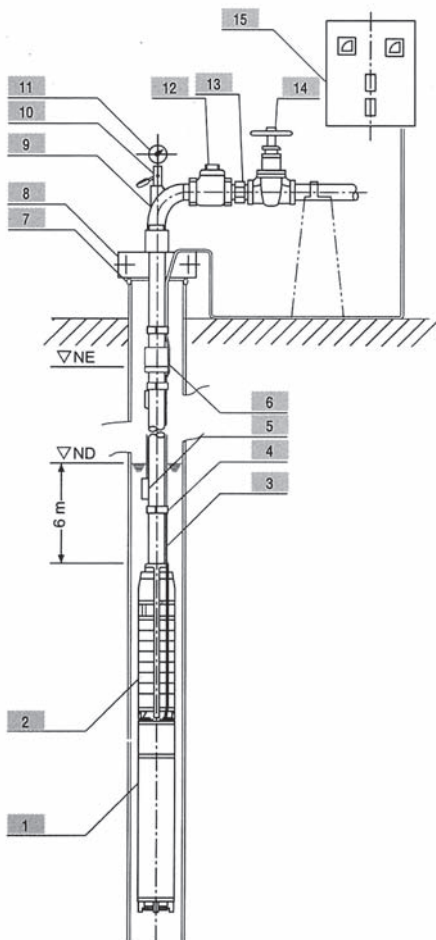


"Elastic deflection" axial thrust bearing, an EBARA world patent, in specific models for each type of motor. High quality and low cost.

STANDARD SPECIFICATIONS

BHS Mode		222	232	411	412	511	512	516	517	813	804	1010	1012	1015	1220					
Liquid Handled		Clean water																		
Temperature Limit of the Liquid		max. 40°C (see motor specifications for further details)																		
Permissible Amount of Sand		max. 50ppm																		
Permissible Size of Sand Grains		max. 0.25mm																		
Permissible Amount of Chlorides		max. 500ppm																		
Permissible PH of the Liquid		6.5 - 8.0																		
Pump	Outlet Fitting	40			50			80			125			150			200			
	Outlet Diameter	BSP	1 1/2"			2"			3"			5"			6"			8"		
		NPT			6"					
	Construction	Impeller Type	Closed type																	
		Type of Flow	radial flow						mixed flow											
		Type of Casing	semi-guide vane						bowl											
		Rotation	C.C.W. when viewed from motor																	
		Pump Check Valve	built in																	
	Materials	Casing	cast iron																	
		Diffuser	66 nylon reinforced with fiberglass						cast iron											
		Impeller	stainless steel						bronze											
		Bearings	rubber									bronze								
Shaft		Stainless steel																		
Bolts and Nuts		Stainless steel																		

Scheme of installation



N°	DESCRIPTION
1	Submersible motor
2	Submersible pump
3	Electric cables
4	Clip
5	Electrode
6	Sleeve
7	Well Cover
8	Clamp
9	Elbow
10	Valve
11	Pressure Gauge
12	Check Valve
13	Nipple
14	Valve
15	Control Panel

NE - Natural water level

ND - Water level in operation

STANDARD SPECIFICATIONS (REWINDABLE MOTOR)

Frame Size		M 4	M 6		M 8	M 10	M 12	
Motor Model		M 4	M 6P	M 6G	M 8	M 10	M 12	
Voltage		220 / 380	230 / 380 / 440		380 / 440			
Number of Poles		2						
Number of Phases		Single - Three		Three				
Type of Operation		Continuous						
Output (HP)	50 Hz	1 - 4	1.5 - 15	20 - 30	35 - 75	80 - 200	-----	
	60 Hz	1 - 5	1.5 - 15	20 - 30	30 - 100	125 - 200	225 - 350	
Permissible Handled Liquid Temperature	50 Hz	up to 65 Hp - max. 40° C up to 70 Hp - max. 35° C 75 - 200 Hp - max. 30° C						
	60 Hz	up to 70 Hp - max. 40° C 75 - 90 Hp - max. 35° C 100 - 350 Hp - max. 30° C						
Permissible Voltage Fluctuation		-5% - +10%						
Permissible Frequency Fluctuation		-5% - +5%						
Motor	Cooling System	Cooling Liquid	Water from Well					
	Required Water Velocity (m/s)	50 Hz	0.1	0.3	0.5	0.5	0.8	-----
		60 Hz	0.1	0.3	0.5	0.5	0.5	0.7
	Construction	Insulation	Class Y					
		Type of Insulation	Watertight Insulated					
		Starting System	Direct and Star-Delta					
		Capacity of the Thrust Bearing (Kg)	200	500	1,600	2,500	5,000	5,000
		Max. Diam. (mm)	95	139	139	180	222	273
	Materials	Shaft	Stainless Steel					
		Frame	Carbon Steel					
		Bracket	Cast Iron					
		Oil Seal	Rubber					
		Bearing Bushing	Bronze					
Thrust Pad		Carbon						
Thrust Carbon		Stainless Steel						
Sealant		Water Solution of Propylene Glycol						
	Coil	Polypropylene - Cooper						

Optional specifications

- To order pump or motor other than standard specifications and the performance data set forth herein, please contact the manufacturer or your local dealer.

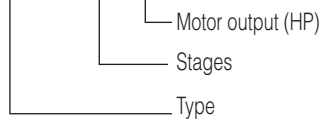
PUMPS SELECTION

Remarks

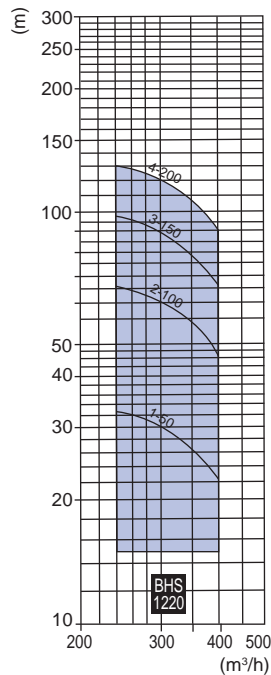
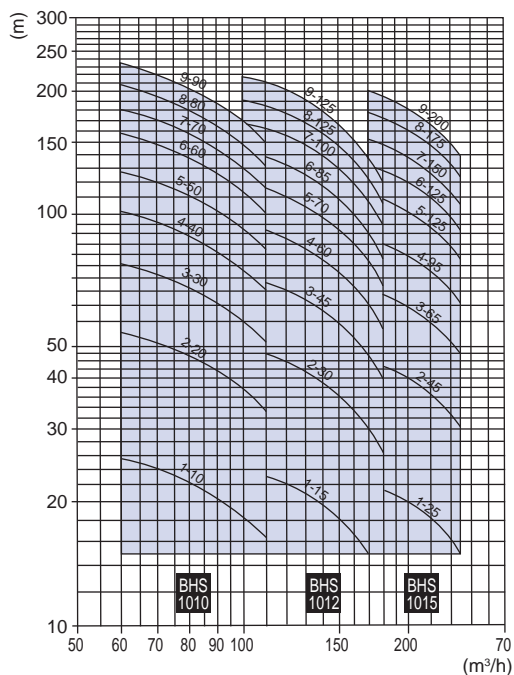
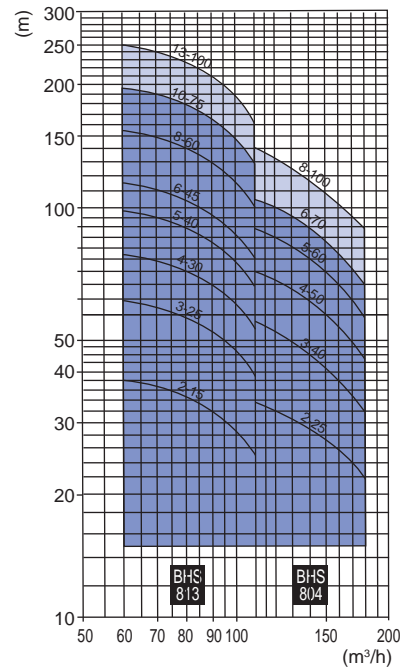
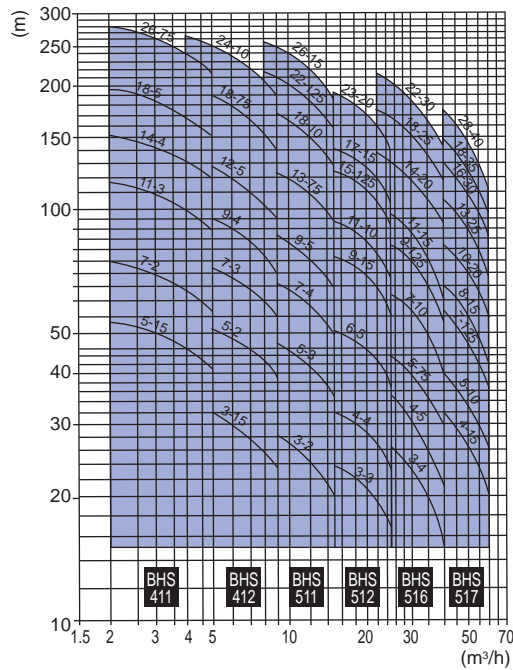
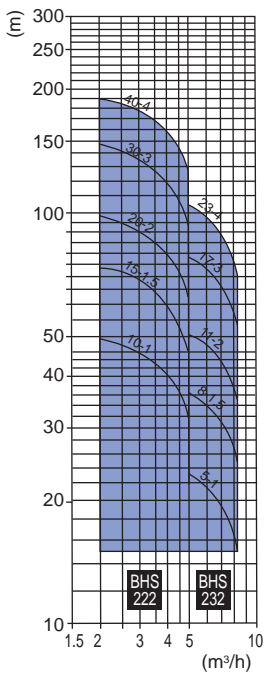
The performance curve and dimensions displayed represent the maximum number of possible stage for a given motor output. For intermediate or higher curves, please contact the manufacturer or your local dealer.

Symbols

BHS 411 - 18 - 5



- For 4" or larger well
- For 6" or larger well
- For 8" or larger well
- For 10" or larger well
- For 12" or larger well



DIMENSIONS

Model		Weight (Kg)	Dimensions (mm)		
			D	Ø	L
BHS 222	10 - 1	28.5	98	1 1/2"	1109
	15 - 1.5	34	98	1 1/2"	1284
	20 - 2	37	98	1 1/2"	1429
	30 - 3	49.5	98	1 1/2"	1824
	40 - 4	58	98	1 1/2"	2209

BHS 411	5 - 1.5	50.7	144	2"	998
	7 - 2	56.3	144	2"	1089
	11 - 3	66.5	144	2"	1266
	14 - 4	73.9	144	2"	1400
	18 - 5	86.1	144	2"	1592
	26 - 7.5	109	144	2"	2024

BHS 511	2 - 1.5	45.6	144	2"	894
	3 - 2	49.6	144	2"	952
	5 - 3	56.6	144	2"	1063
	7 - 4	62.4	144	2"	1169
	9 - 5	71.3	144	2"	1295
	13 - 7.5	85.2	144	2"	1527
	18 - 10	100	144	2"	1797
	22 - 12.5	116	144	2"	2087
26 - 15	131	144	2"	2324	

BHS 516	2 - 3	56	146	3"	1062
	3 - 4	63.5	146	3"	1192
	4 - 5	74	146	3"	1342
	5 - 7.5	85.5	146	3"	1512
	7 - 10	104	146	3"	1787
	9 - 12.5	119	146	3"	2057
	11 - 15	137	146	3"	2342
	14 - 20	175	146	3"	2967
	18 - 25	205	146	3"	3477
	22 - 30	236	146	3"	4007

BHS 813	1 - 7.5	81	190	5"	1145
	2 - 15	109	190	5"	1460
	3 - 25	149	190	5"	1970
	4 - 30	168	190	5"	2205
	5 - 40	211	190	5"	2183
	6 - 45	232	190	5"	2388
	7 - 55	259	190	5"	2633
	8 - 60	269	190	5"	2778
	9 - 65	305	190	5"	3053
	10 - 75	315	190	5"	3198
	11 - 80	405	222	5"	3536
	12 - 90	415	222	5"	3681
	13 - 100	425	222	5"	3831

BHS 1010	1 - 10	113	240	6"	1335
	2 - 20	160	240	6"	1890
	3 - 30	189	240	6"	2195
	4 - 40	234	240	6"	2148
	5 - 50	257	240	6"	2353
	6 - 60	286	240	6"	2598
	7 - 70	324	240	6"	2873
	8 - 80	416	240	6"	3154
	9 - 90	428	240	6"	3299

BHS 1015	1 - 25	158	240	6"	1840
	2 - 45	225	240	6"	1968
	3 - 65	282	240	6"	2368
	4 - 85	436	240	6"	2674
	5 - 125	450	240	6"	2914
	6 - 125	464	240	6"	3084
	7 - 150	478	240	6"	3394
	8 - 175	542	240	6"	3724
	9 - 200	576	240	6"	3994

Model		Weight (Kg)	Dimensions (mm)		
			D	Ø	L
BHS 232	5 - 1	26	98	1 1/2"	1009
	8 - 1.5	30	98	1 1/2"	1153
	11 - 2	32.5	98	1 1/2"	1267
	17 - 3	43	98	1 1/2"	1600
	23 - 4	49.5	98	1 1/2"	1923

BHS 412	3 - 1.5	47.1	144	2"	922
	5 - 2	52.7	144	2"	1013
	7 - 3	59.3	144	2"	1114
	9 - 4	65	144	2"	1210
	12 - 5	75.4	144	2"	1364
	18 - 7.5	92.3	144	2"	1652
	24 - 10	111	144	2"	2003

BHS 512	2 - 2	47.8	144	2"	929
	3 - 3	52.8	144	2"	1007
	4 - 4	56.8	144	2"	1080
	6 - 5	65.9	144	2"	1226
	9 - 7.5	78	144	2"	1445
	11 - 10	89	144	2"	1606
	15 - 12.5	103	144	2"	1868
	17 - 15	117	144	2"	2107
	23 - 20	151	144	2"	2720

BHS 517	2 - 4	59	144	3"	1112
	4 - 7.5	82	144	3"	1462
	5 - 10	93	144	3"	1642
	7 - 12.5	111	144	3"	1942
	8 - 15	124	144	3"	2132
	10 - 20	158	144	3"	2677
	13 - 25	184	144	3"	3122
	16 - 30	211	144	3"	3587
	18 - 35	256	180	3"	3690
	20 - 40	268	180	3"	3940

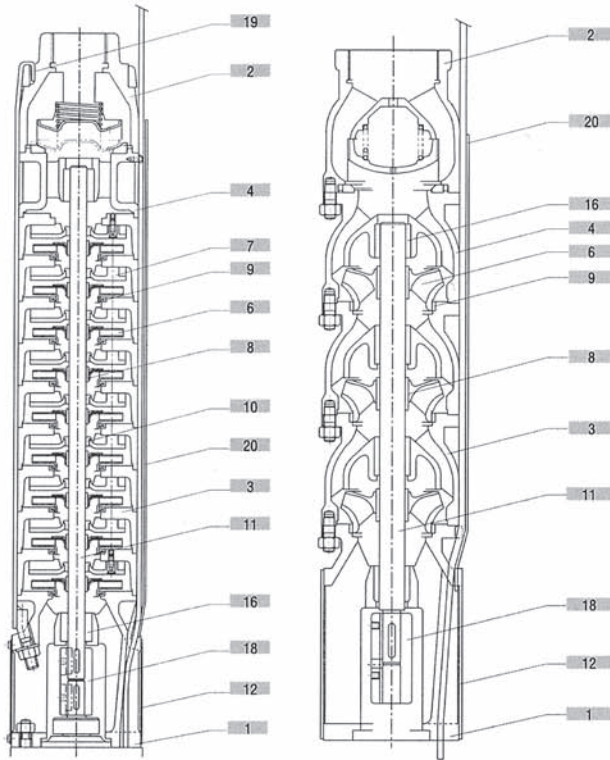
BHS 804	1 - 15	100	192	5"	1330
	2 - 25	141	192	5"	1855
	3 - 40	194	192	5"	1938
	4 - 50	216	192	5"	2158
	5 - 60	244	192	5"	2418
	6 - 70	281	192	5"	2708
	7 - 85	372	222	5"	3061
	8 - 100	383	222	5"	3221

BHS 1012	1 - 15	127	240	6"	1460
	2 - 30	179	240	6"	2070
	3 - 45	236	240	6"	2093
	4 - 60	266	240	6"	2348
	5 - 70	305	240	6"	2633
	6 - 85	398	240	6"	2924
	7 - 100	411	240	6"	3079
	8 - 125	444	240	6"	3304
	9 - 125	457	240	6"	3459

BHS 1220	1 - 50	274	295	8"	2003
	2 - 100	429	295	8"	2604
	3 - 150	521	295	8"	3049
	4 - 200	623	295	8"	3544

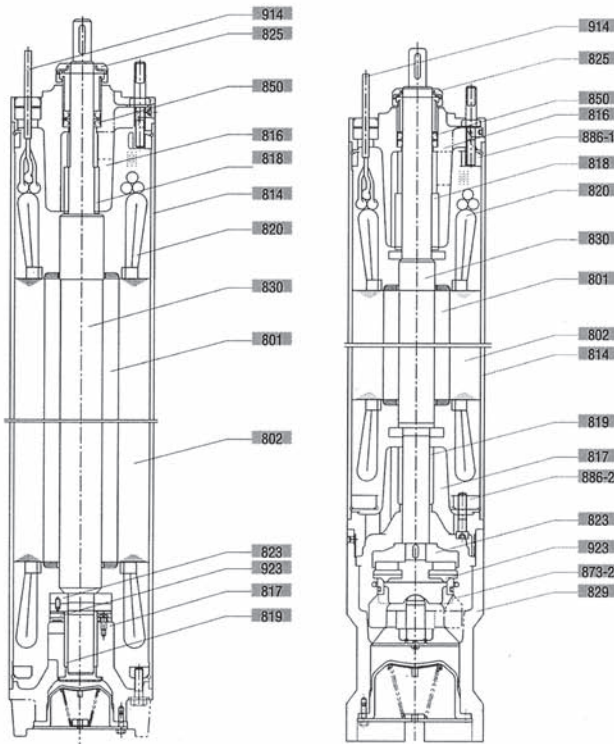
SECTIONAL VIEW

Pump



N°	DESCRIPTION
1	Suction Casing
2	Valve Casing
3	Intermediate Casing
4	Final Stage Casing
6	Impeller
7	Diffuser
8	Taper Collet
9	Liner Ring
10	Intermediate Bush
11	Pump Shaft
12	Strainer
16	Sleeve Bearing
18	Socket Coupling
19	Clamp Band
20	Cable Protector

Motor



N°	DESCRIPTION
801	Rotor
802	Stator
814	Frame
816	Upper Bracket
817	Lower Bracket
818	Upper Bearing
819	Lower Bearing
820	Coil
823	Thrust Disc
825	Sand Slinger
829	Thrust Bearing Housing
830	Shaft
850	Oil Seal
886-1	Upper Frame Ring
886-2	Lower Frame Ring
873-2	Thrust Pedestal
914	Lead Cable
923	Thrust Pad